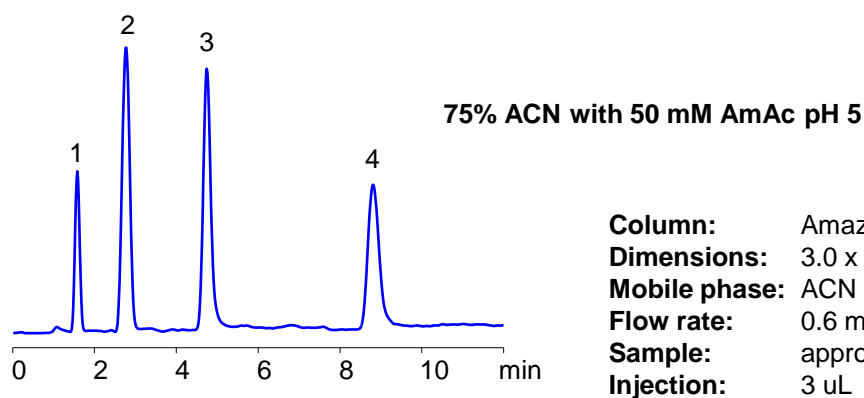
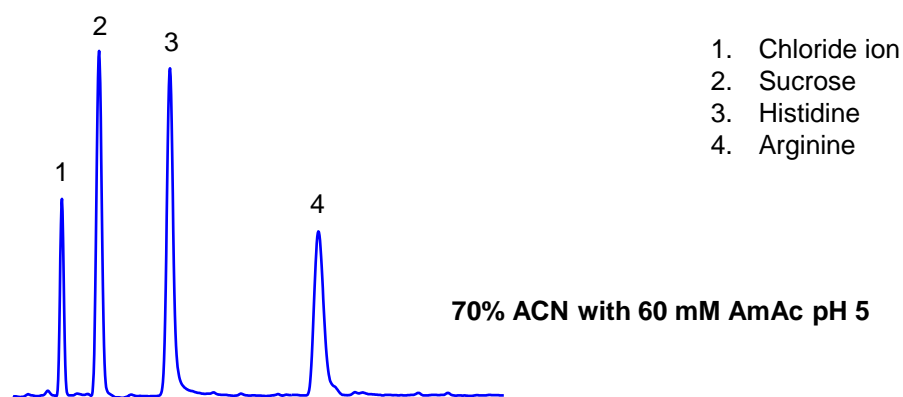


## HILIC Mixed-Mode Separation of Polar Pharmaceuticals and Nutraceutical on Amaze HD Column



**Column:** Amaze HD  
**Dimensions:** 3.0 x 100 mm, 3  $\mu$ m, 100A  
**Mobile phase:** ACN with Ammonium acetate buffer pH 5  
**Flow rate:** 0.6 ml/min  
**Sample:** approx 2 mg/ml each  
**Injection:** 3  $\mu$ L

## Application Notes

HELIX Chromatography mixed-mode columns were designed to address issues of poor polar compounds retention by one, two, or three mechanisms at the same time. Control of such mechanisms by mobile phase variations allows the development of robust separation for polar compounds. Pharmaceutical and nutraceutical compositions often contain amino acids, acids, and sugars.

Amaze HD is a HILIC mixed-mode column that retains compounds by HILIC, cation-exchange, and anion-exclusion mechanisms. In the attached application chloride ion, sucrose, histidine, and arginine are separated based on several mechanisms of interaction.

- Chloride ion is retained by a combination of HILIC and anion-exclusion mechanisms.
- Sucrose is retained by a pure HILIC mechanism.
- Histidine is retained by a combination of HILIC and cation-exchange mechanisms
- Arginine is retained by a combination of HILIC and cation-exchange mechanisms.

There are more ways to control retention in mixed-mode chromatography than in any single mode separations. See more at [www.helixchrom.com](http://www.helixchrom.com)